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EXAMINER

TRAN, THANH Y

ART UNIT

PAPER NUMBER

2841

DATE MAILED: 04/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/879,783

Applicant(s)

CALDWELL, BARRY

Examiner

Thanh Y. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2-11 and 13-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-11 and 13-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 2-4, 6, 13-14, 17 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Clark, Jr. et al. (U.S. 5,785,913).

As to claim 2, Clark, Jr. et al discloses an adhesive (68, Fig. 12A) suitable to provide a bond between components (70a, 70b), comprising an adhering material (68) suitable for holding a first surface and a second surface in contact; and a plurality of items (5) disposed in the adhering material (68), the plurality of items (5) having electromagnetic capability (EMC) shielding characteristics (see Figs. 12A-12B, elements 5, 66 and 72; col. 6, line 64 - col. 7, line 17), wherein an item of the plurality of items includes at least one of ferromagnetic material (ferrite) (see col. 2, lines 10-65, and col. 4, lines 10-33).

As to claim 3, Clark, Jr. et al discloses an adhesive (68, Fig. 12A) wherein the ferromagnetic material includes ferrite (see col. 2, lines 23-37).

As to claim 4, Clark, Jr. et al discloses an adhesive (68, Fig. 12A) wherein a quantity of the plurality of items (5) disposed in the adhering material (68) is sufficient to provide EMC shielding between the first surface and the second surface (see Fig. 12A).

As to claim 6, Clark, Jr. et al discloses an adhesive (68, Fig. 12A) wherein the plurality of items including diamond shapes (see col. 2, lines 22-37).

As to claim 13, it recites limitations similar to claim 2. Therefore, it is rejected for the same reasons.

As to claim 14, it recites limitations similar to claim 3. Therefore, it is rejected for the same reasons.

As to claim 17, it recites limitations similar to claim 6. Therefore, it is rejected for the same reasons.

As to claim 25, Clark, Jr. et al discloses an adhesive (68, Fig. 12A) wherein carrier material (68) is thermally conductive (see Fig. 12A, element 5; col. 2, lines 10-65).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clark, Jr. et al. (U.S. 5,785,913) in view of Ameen et al. (U.S. 5,591,034).

As to claim 5, Clark, Jr. et al. does not teach an adhesive is used for bonding between the first component surface including an integrated circuit, and the second component surface including on a heat sink. Ameen et al. teaches an adhesive (see Fig. 1, element 10, col. 5, lines 5-17) wherein the first surface (20) is included on an integrated circuit (14) and the second surface (18) is included on a heat sink (12). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to use an adhesive of Clark, Jr.

et al in the interconnection of Ameen et al. for the purpose of intended use (e.g., shielding the magnetic flux or electromagnetic from the external sources).

As to claim 15, it recites limitations similar to claims 4 and 5. Therefore, it is rejected for the same reasons.

As to claim 16, it recites limitations similar to claim 5. Therefore, it is rejected for the same reasons.

5. Claims 7-11 and 18-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clark, Jr. et al (U.S. 5,785,913).

As to claims 7-9, claim 7 recites limitations similar to claim 2, except for the limitations of “*an item of the plurality of items is formed wherein a longest dimension is at least one of equal to and less than one-half of a distance between the first surface and the second surface*”. However, it would have been an obvious matter of design choice to modify the dimension of an item of Clark, Jr. et al by having a specific dimension which *is at least one of equal to and less than one-half of a distance between the first surface and the second surface*, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art. (see In re Aller, 105 USPQ 233 and In re Peterson 01/08/03). The same reasoning applies to claims 8 and 9 regarding the limitation of the specific dimension as discussed above.

As to claims 10-11, and 20 they recite the limitations similar to claim 2, the same reasoning also applies to claims 10, 11 and 20 regarding the specific dimension as discussed above in claims 7-9.

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As to claims 18 and 19, they recite limitations similar to claims 7 and 8. Therefore, they are rejected for the same reasons.

As to claims 21-23, they recite limitations similar to claim 2, the same reasoning also applies to claims 21-23 regarding the specific dimension as discussed above in claims 7-9.

As to claim 24, it recites plurality of items having the specific length of 3 microns and 1 millimeter. Thus it is rejected for the same reason as discussed above in claims 7-9 regarding the specific size of the items.

### ***Response to Arguments***

Applicant's arguments filed on 1/30/03 have been fully considered but they are not persuasive.

With respect to claims 2, 13 and 23, Applicant argues that Clark, Jr. et al does not teach an item of the plurality of items includes magnetic shielding alloy. However, Applicant recites in claims 2, 13 and 13 “an item of the plurality of items includes at least one of ceramic ferromagnetic material and magnetic shielding alloy”. Applicant only recites one of two items and does not recite both “ceramic ferromagnetic material” and “magnetic shielding alloy”. Therefore, the limitations in claims 2, 13 and 23 still read on the reference of Clark, Jr. et al because Clark, Jr. et al's reference teaches that an adhesive (68, Fig. 12A) suitable to provide a bond between components (70a, 70b), comprising a plurality of items (5) which *inherently* have electromagnetic capability (EMC) shielding characteristics (see Figs. 12A-12B, elements 5, 66 and 72; col. 6, line 64 - col. 7, line 17), wherein an item of the plurality of items includes at least one of ferromagnetic material (ferrite) (see col. 4, lines 20-22). It should be noted that “ceramic

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ferromagnetic materials” are considered as “ferrites” as mentioned in the specification of the invention, page 6, lines 13-23.

With respect to claims 7, 10, 11, 18 and 21-22, Applicant argues that there is no motivation or suggestion for modifying or combining the cited reference of Clark, Jr. et al regarding the optimum ranges in claims 7, 10, 11, 18 and 21-22. The Examiner disagrees, because discovering the optimum or working ranges is a narrative form and not given any patentable weight since the Court said: “The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages.” (See *In re Peterson* 01/08/03). Therefore, claims 7, 10, 11, 18 and 21-22 are rejected.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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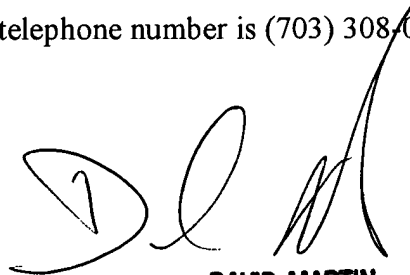
Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh Y. Tran whose telephone number is (703) 305-4757. The examiner can normally be reached on Monday through Thursday and on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin, can be reached on (703) 308-3121. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3431.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

TYT



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